

PATENT
Reply under 37 CFR 1.116
EXPEDITED PROCEDURE
Group 1734

REMARKS

Claims 1-39 are pending and rejected in this application.

Responsive to the Examiner's rejection of claims 1-32 and 39 under 35 U.S.C. §103(a) as being unpatentable over German Patent No. 197 14 645 (Becker) in view of U.S. Patent No. 5,415,612 (Carlson et al.), Applicants respectfully traverse the Examiner's rejection, and submits that claims 1-32 and 29 are in condition for allowance.

Becker discloses a roll installed in a device for coating a material web 13, specifically a paper or cardboard web, whereby the roll is in the form of a compression roll 7 or 8, a backing roll 21 or an applicator roll 22. Roll 1 has a hollow cylindrical supporting body 2 having an outer surface onto which a compressible layer 4 of cellular synthetic material having a multitude of pores and a compression module of less than 100 MPa is applied. Over compressible layer 4 is applied a smooth layer 5 (Abstract). Layer 4 is made of a cellular synthetic material that displays a plurality of gas or air-filled pores. A large number of relatively smaller pores of less than 5 mm are uniformly distributed over the volume of layer 4. Layer 4 is between 2 mm and 20 mm thick and layer 5 is between 5 mm and 30 mm thick (pages 5 and 6). The Examiner has indicated that the cavity sizes of the material range from 0.05 mm - 1.0 mm, which the Examiner indicates as being substantially uniform in size. Further, the Examiner has stated that, "one of ordinary skill in the art would have expected the cavities in the Becker layer 4 to be substantially uniform in size in order to be uniformly distributed through layer 4."

Carlson et al. disclose a compressible roller 10 for use in high speed printing including foam layer 12 that is glued onto roller core 11. Seal 14 is applied over foam layer 12 and a print layer 13 is formed by applying an elastomer over seal 14 (column 3, lines 17-45). The cavities are illustrated as being non-uniform in size (Fig. 3).

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In contrast claim 1 recites, in part:

a compressible covering formed of an elastomeric material ... having a plurality of substantially uniformly distributed cavities, said cavities being of a substantially uniform size;

(Emphasis added). Applicants submit that such an invention is neither taught, disclosed nor suggested by Becker, Carlson et al. or any of the other cited references, alone or in combination, and includes distinct advantages thereover.

Becker discloses a roll installed on a device for coating in material web including a coating layer having cavity sizes in the range from 0.05 millimeters to 1.0 millimeters. Carlson et al. disclose a compressible roller having cavities that are illustrated as being non-uniform in size. The Examiner has indicated that the cavity sizes of Becker, which ranges from 0.05 millimeters to 1.0 millimeters is of a substantially uniform size. However, this range of sizes is a twenty fold range in size, since the smaller size is 1/20 of the larger size contained in this range. Assuming that the dimensions given in Becker are a diameter, then the range which the Examiner has indicated as substantially uniform in size actually varies in terms of volume by a factor of 1000 from the largest to the smallest. It is Applicants' position and a common understanding, that cavity sizes that differ in volume by a factor of 1000 are not substantially uniform in size. In contrast, the present invention indicates that the cavities of layer 12 are of substantially uniform size. While cavities 8 are described as being less than 30 micrometers in diameter, the size that is selected and is utilized in layer 12 are cavities of substantially uniform size within that range. The Examiner has further indicated that cavities would be of uniform size if they are uniformly distributed. Applicants' respectfully disagree that items in general have to be of uniform size in order to be uniformly distributed. Logic does not lead to a conclusion that uniformly sized cavities are needed for there to be a uniform distribution of the cavities. Fig. 2 of Becker

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illustrates Applicants' position in that there is non-uniformity in the size of the cavities, yet there appears to be a pattern of uniform distribution of the non-uniform cavities. Therefore, Becker, Carlson et al. and any of the other cited references, alone or in combination, fail to disclose, teach or suggest a compressible covering formed of an elastomeric material having a plurality of substantially uniformly distributed cavities, the cavities being of a substantially uniform size, as recited in claim 1.

An advantage of Applicants' invention is that having cavities of a substantially uniform size and distribution results in uniform pressure being applied to the fiber web. For the foregoing reasons, Applicants submit that claim 1 and claims 2-17 depending therefrom, are in condition for allowance, which is hereby respectfully requested.

In further contrast, claim 18 recites, in part:

a compressible covering formed of an elastomeric material ... having a plurality of substantially uniformly distributed cavities, said cavities being of a substantially uniform size;

(Emphasis added). Applicants submit that such an invention is neither taught, disclosed nor suggested by Becker, Carlson et al. or any of the other cited references, alone or in combination, and includes distinct advantages thereover.

Becker discloses a roll installed on a device for coating in material web including a coating layer having cavity sizes in the range from 0.05 millimeters to 1.0 millimeters. Carlson et al. disclose a compressible roller having cavities that are illustrated as being non-uniform in size. The Examiner has indicated that the cavity sizes of Becker, which ranges from 0.05 millimeters to 1.0 millimeters is of a substantially uniform size. However, this range of sizes is a twenty fold range in size, since the smaller size is 1/20 of the larger size contained in this range. Assuming that the dimensions given in Becker are a diameter, then the range which the Examiner has

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indicated as substantially uniform in size actually varies in terms of volume by a factor of 1000 from the largest to the smallest. It is Applicants' position and a common understanding, that cavity sizes that differ in volume by a factor of 1000 are not substantially uniform in size. In contrast, the present invention indicates that the cavities of layer 12 are of substantially uniform size. While cavities 8 are described as being less than 30 micrometers in diameter, the size that is selected and is utilized in layer 12 are cavities of substantially uniform size within that range. The Examiner has further indicated that cavities would be of uniform size if they are uniformly distributed. Applicants' respectfully disagree that items in general have to be of uniform size in order to be uniformly distributed. Logic does not lead to a conclusion that uniformly sized cavities are needed for there to be a uniform distribution of the cavities. Fig. 2 of Becker illustrates Applicants' position in that there is non-uniformity in the size of the cavities, yet there appears to be a pattern of uniform distribution of the non-uniform cavities. Therefore, Becker, Carlson et al. and any of the other cited references, alone or in combination, fail to disclose, teach or suggest a compressible covering formed of an elastomeric material having a plurality of substantially uniformly distributed cavities, the cavities being of a substantially uniform size, as recited in claim 18.

An advantage of Applicants' invention is that having cavities of a substantially uniform size and substantially uniform distribution results in uniform pressure being applied to the fiber web. For the foregoing reasons, Applicants submit that claim 18 and claims 19-32 and 39 depending therefrom, are in condition for allowance, which is hereby respectfully requested.

Claims 33-38 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Becker in view of U.S. Patent No. 5,650,010 (Rantanen et al.). However, claims 33-38 depend from claim 18, and claim 18 is in condition for allowance for the reasons given above.

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Accordingly, Applicants submit that claims 33-38 are in condition for allowance, which is hereby respectfully requested.

For the foregoing reasons, Applicants submit that no combination of the cited references teaches, discloses or suggests the subject matter of the amended claims. The pending claims are therefore in condition for allowance, and Applicants respectfully request withdrawal of all rejections and allowance of the claims.

In the event Applicants have overlooked the need for an extension of time, an additional extension of time, payment of fee, or additional payment of fee, Applicants hereby conditionally petition therefor and authorize that any charges be made to Deposit Account No. 20-0095, TAYLOR & AUST, P.C.

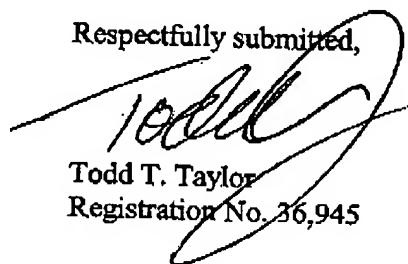
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Should any question concerning any of the foregoing arise, the Examiner is invited to telephone the undersigned at (260) 897-3400.

Respectfully submitted,



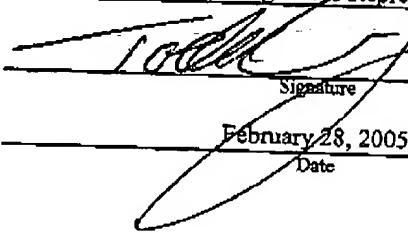
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CERTIFICATE OF MAILING

I hereby certify that this correspondence is being transmitted via facsimile to the U.S. Patent and Trademark Office, on: February 28, 2005.

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TTT6/dc

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